

PAYNE RANCH OAK-GRASSLAND WEED CONTROL PROJECT

Environmental Assessment CA-340-05-014

An Assessment of Methods to Reduce Weed Species including Yellow Starthistle, Medusahead
and Barbed Goatgrass on Oak-Grassland Habitats of the Payne Ranch within the Cache Creek
Natural Area.

October 17, 2005

United States
Department of the Interior

Bureau of Land Management
Ukiah Field Office
2550 North State Street
Ukiah, California

ENVIRONMENTAL ASSESSMENT

Date: October 17, 2005

Project Title: Payne Ranch Oak-Grassland Weed Control Project.

Name and Address of Applicant: Bureau of Land Management, Ukiah Field Office

Project Location: Portions of T.13N., R.5W; T.13N., R.4W. Colusa County, California (Wilbur Springs, Salt Canyon, Glascock Mtn. and Wilson Valley 7.5' Quadrangles). The area is located 18 miles west of Williams, California and 20 miles east of Clearlake Oaks, California.

Land Status Verified: Yes

Affected Surface Area: 7365 acres.

Conformance with Applicable Land Use Plan: Clear Lake Resource Area Management Framework Plan (MFP) Update, 1984. Cache Creek Coordinated Resource Management Plan (CRMP), 2004. Draft Ukiah Resource Management Plan (RMP), 2005.

Relationship to Statutes, Regulations, Policies, Plans or Other Environmental Documents: Federal Land Policy and Management Act, 1976; Public Rangelands Improvement Act, 1978; Carlson-Foley Act, 1968; Federal Noxious Weed Act of 1974, as amended by Sec. 15 - Management of Undesirable Plants on Federal Lands, 1990; Code of Federal Regulations (CFR 43CFR 4130.5(b) (3)

This project would be implemented under the Bear Creek Integrated Weed Management Program in partnership with UC Davis. It is tiered to the Cache Creek CRMP.

Remarks: This area is historically known as the Payne Ranch. The BLM acquired 11,091 acres of the Payne Ranch in three phases; 1999-2000 (see EA #340-00-019). An additional 1,678 acres was purchased by the Rocky Mountain Elk Foundation because of the presence of a tule elk herd and the potential for habitat improvement for elk and other native species. The BLM has since purchased these lands back from the Rocky Mountain Elk Foundation. The acquisition became an integral part of the Cache Creek Natural Area (71,000 acres).

Purpose and Need for the Proposed Action: The BLM is under a mandate from the Statutes, Regulations, and Policies referred to above to reduce the proliferation of noxious weeds on public rangelands. Several noxious weeds including yellow starthistle, medusahead, and barbed goatgrass have spread throughout portions of the Payne Ranch. Significant amounts of weed thatch are present. Weed thatch prevents native species from germinating by creating an extremely thick layer of residual mulch that only medusahead and yellow starthistle can germinate and grow through. In addition weeds are outcompeting native species for light, nutrients and water. An integrated Weed Management Program has been implemented to reduce the amount of weeds by using several "tools" including use of

herbicides, mowing and prescribe burning, planting native species, and where feasible, hand pulling.

This project is designed with the goal that the proposed action will result in an increase in population density of key indicator species including purple needlegrass (*Nassella pulchra*) California onion grass (*Melica californica*), squirrel tail (*Elymus multisetus*), June grass (*Koeleria macrantha*), blue wildrye (*Elymus glaucus*), creeping wildrye (*Leymus triticoides*) and seedlings of blue oak (*Quercus douglasii*). The goal also includes a corresponding decrease in population density over a 5-year period of the target weed species including yellow starthistle (*Centaurea solstitialis*), barbed goatgrass (*Aegilops triuncialis*) and medusahead (*Elymus caput-medusae*). If results of the proposed action after 5 years are significantly less than anticipated, alternate methods of weed eradication would be considered. The establishment, health and management of perennial grasses are also an important long term goal of the Cache Creek CRMP and Draft Ukiah RMP.

A range of alternatives have been considered, including prescribed fire, herbicide application, mowing, hand pulling, prescription grazing, and biological controls to accomplish the purpose and need of the project. These alternatives are described below under Alternatives.

Affected Environment: The elevation of the project area ranges from 630 feet to 1080 feet. Mean annual precipitation is 18 to 22 inches. The area is characterized by rolling hills bisected by steep canyons dominated by a mosaic of annual grassland, gray pine and blue oak woodlands, serpentine shrub complex, and chaparral. Remnant purple needlegrass plants (*Nassella pulchra*) are found intermixed with annuals throughout the area including soft chess (*Bromus hordeaceus*), nitgrass (*Gastridium ventricosus*), wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis*) Mediterranean barley (*Hordeum marinum*), foxtail barley (*Hordeum murinum*) and Italian ryegrass (*Lolium multiflorum*). Two large interior valleys with stock ponds are also found in the area. Bear Creek is a perennial creek with an extensive riparian area and is located on the eastern side of the project area adjacent to Highway 16. The Bear Creek drainage includes Thompson, Craig, Eula and Brophy Canyons. Seventeen stock ponds of varying sizes are found throughout the project area.

It is believed that one of the causes of the current noxious weed infestation on the Payne Ranch began with unmanaged cattle grazing over a long period of time. During this time livestock were typically released onto the range in November, and then picked up in June. Each year there were usually a few dozen head that were not rounded up and which remained within riparian areas, particularly Bear Creek. Due to the overgrazing during these years, perennial grasses which are very palatable to livestock, decreased in numbers. Noxious weeds began to spread throughout the range and were soon able to out-compete the smaller populations of perennials.

Since August of 2001, shortly after BLM completed the acquisition of this property, there has been no livestock grazing. This recent period of no grazing is the second cause that has exacerbated the noxious weed situation by allowing dense populations of these weed species, including barbed goatgrass (*Aegilops triuncialis*), yellow starthistle (*Centaurea solstitialis*), and medusahead (*Elymus caput-medusae*) to grow unchecked in the absence of any grazing. This shows that overgrazing, as well as completely stopping all grazing, can both be advantageous conditions for the spread of noxious weeds.

Additionally, the riparian habitat of Bear Creek and its tributaries are infested with tamarisk (*Tamarix parviflora*) and perennial pepperweed (*Lepidium latifolium*).

Since the acquisition of the ranch the BLM has conducted prescribed burns, mowing, and pesticide applications to reduce the weed populations in selected sites (See Table 1 below).

Table 1. Vegetation Management Projects on the Payne Ranch

Target Weed Species	Location/Control Method	Acres	EA #
Medusahead, Yellow Starthistle, Barbed Goatgrass	Bear Creek Prescribe Burn	140	CA-340-03-011
Medusahead, Yellow Starthistle,	Payne Ranch Prescribe Burn	250	CA-340-05-003
Medusahead, Yellow Starthistle, Barbed Goatgrass	Mowing and Native Seeding- Cache Creek Natural Area	150	CA-034-02-017
Yellow Starthistle	Bear Cr. Yellow Starthistle Spraying	120	CA-034-03-016
Barbed Goatgrass	Payne Ranch (Bear Creek) Pesticide Application (Roundup/Rodeo) & Mowing	100	CA-340-01-010
Tamarisk	Eula, Craig and Thompson Canyon Pesticide Application (Garlon)	20	CA-340-99-021
Tamarisk	Bear Creek Pesticide Application (Stalker)	180	CA-340-02-023
Tamarisk	Bear Creek Biological Control Cage and Release Study	10	CA-340-01-021

Bear Creek is a fish-bearing stream with a warm water fishery (See Table 2.). Other aquatic species include the beaver, otter, northwestern pond turtle (*Clemmys marmorata marmorata*) and the foothill yellow-legged frog (*Rana boylei*) a BLM sensitive species.

Table 2. Fish Species Found in Bear Creek

Common Name	Scientific Name	Location
Rainbow Trout	<i>Oncorhynchus mykiss</i>	Only in upper reaches and tributaries north of Highway 20. All private land
Green sunfish	<i>Lepomis cyanellus</i>	BLM south of Highway 20
Bluegill	<i>Lepomis macrochirus</i>	BLM south of Highway 20
Smallmouth Bass	<i>Micropterus dolomieu</i>	BLM south of Highway 20
Clear Lake Pike (Sacramento pike minnow, formerly squawfish)	<i>Ptychocheilus grandis</i>	BLM south of Highway 20
Sacramento sucker	<i>Catostomus occidentalis</i>	BLM south of Highway 20
California roach	<i>Hesperoleucus symmetricus</i>	BLM south of Highway 20
Speckled dace	<i>Rhinichthys osculus</i>	BLM south of Highway 20

The project area is primitive in nature and supports many game and nongame species including tule elk, black bear, mountain lion, bobcat, turkey, and valley quail. Numerous species of passerine birds are found in the area including sightings of yellow-billed magpies and roadrunners. The threatened bald eagle is seen year-round, but more so in the winter months.

Soils in the area include Okiota-Henneke association in the northern part of the area. These are moderately deep or shallow, strongly sloping to very steep, well drained soils formed in residuum from peridotite rock (serpentine) on the Coast Range mountains. Major uses of these types of soils include wildlife habitat, recreation and watershed. Slow permeability and shallow soil depth are of concern.

The southern part of the area is the Millsholm-Goldeagle-Contra Costa association which are deep to shallow, gently sloping to very steep, well drained soils formed in residuum from sandstone and shale on foothills of the Coast Range. Major use of these types of soils is livestock grazing. Slow permeability and shallow soil depth are of concern.

Alternatives: A range of alternatives have been considered including prescribed fire, herbicide application, mowing, hand pulling, prescription grazing, and biological controls to accomplish the purpose and need of the project. These alternatives are described below.

No Action Alternative

BLM would not conduct weed eradication in the project area.

Alternative 1: Prescribed Fire

BLM would develop a burn plan and implement prescribed burns within the oak-grassland habitats targeting starthistle, medusahead and barbed goatgrass. BLM would identify landscape blocks for treatment. Fire control lines would be established using hand crews and bulldozers to prevent escape from the control blocks. Burning would be done each year prior to the wildfire season, approximately late May to mid-June to ensure highest success in noxious seed mortality, that resources to implement the project are available, risk of fire escapes is reduced, and the fire effects on key wildlife species could be mitigated.

Alternative 2: Herbicide Treatment

BLM would treat the oak-grassland habitats using all-terrain vehicles (ATVs) with spray rig attachments. The type of herbicide used would depend on products approved by BLM for the eradication of the target species and could include Roundup and Transline, among others. Treatments would be correlated with the lifecycle of the target species.

Alternative 3: Mowing

BLM would use a weed mower pulled by a farm tractor to cut the weeds. Timing is critical with this technique to ensure that weeds are treated at the proper stage of growth to result in high seed mortality. It is generally accepted that mowing for medusahead and barbed goatgrass should be conducted by approximately May 15, and mowing for yellow starthistle reduction approximately mid-June to cut the immature seed head while it is on the plant. Topography, presence of rocks, trees, and snags affect the success of this alternative.

Alternative 4: Hand Pulling

BLM would employ crews to pull weeds as feasible in selected sites within the oak-grassland habitats.

Alternative 5 (Proposed Action): Prescription Grazing

Topography has limited the use of prescribed fire, herbicide treatment, and mowing to the more level areas. However, short duration rotational livestock grazing can reduce weed thatch and seed in areas where the other practices (see alternatives 1-4) are unable to be used effectively. Livestock would be used in the infested areas for short durations to remove and trample thatch, and to eliminate seed during the growth and flowering stages of the target weed species. Grazing would begin on approximately November 15 and end approximately mid-May to mid-June of each year depending upon the growth stage of the targeted species. Based on monitoring, each treatment area (see Table 3 below) will be grazed twice during this period, not to exceed 14 days continuous grazing each time before moving into the next treatment area. A total of 500 head of livestock (3,000 AUM's -cow 11/15-2/15, then

cow/calf 2/15-5/15) would be maintained in each treatment area with a 32-inch high electric fence. A range rider would be on-site six days a week and be responsible for maintaining the livestock in the treatment areas and moving the electric fencing. Grazing would be allowed where noxious weeds occur, primarily in the oak-grassland habitats. Grazing would not be allowed in designated critical areas such as elk calving sites, sensitive areas within portions of Thompson Canyon, along Cache Creek, Bear Creek, and on Blue Ridge (located between Lynch Canyon and Bear Creek). BLM specialists would work with the applicant and/or their designee to identify on the ground these locations that are excluded from grazing. If the electric fencing is determined from visitor feedback to be intrusive, it would be removed from each treatment area as livestock are moved.

Table 3. Project area proposed grazing treatment areas, Size, Names, and Number of Stock Ponds

Treatment Area #	Approx. size in acres	Name	Livestock Water Source
1	270	Upper Thompson Cyn	2 Ponds
2	500	East Destanella	Ephemeral Stream
3	685	Eagle	3 Ponds
4	955	Dunfield	4 Ponds
5	780	Upper Brophy Cyn	4 Ponds
6	540	Cache Creek Ridge	1 Pond
7	1320	Lower Brophy Cyn	5 Ponds
8	1070	Thompson Canyon	Ephemeral Stream
9	1245	Craig/Eula Canyons	Ephemeral Stream
TOTAL	7365		

An additional 1300 acres of the treatment area within Colusa County are dense chaparral stands and considered ungrazeable.

This project would be part of the Bear Creek Integrated Weed Management Program, and is a recommended management action of the Cache Creek CRMP (BLM 2004) and the Ukiah Resource Management Plan (Draft, 2005). This program is a partnership of government agencies, education and research institutions, and private land owners in the eradication of noxious weed species in the Bear Creek Watershed.

For the Proposed Action, the applicant would be allowed a degree of flexibility in moving livestock from one treatment area to another. BLM specialists and the applicant would coordinate to decide on treatment areas to use and its grazing duration up to 14 days. Treatment areas would be flexible to adapt and respond to plant phenology. Using updated information based on subsequent monitoring, management actions can then be modified to best meet the overall objectives for weed reduction and the reestablishment of native species.

The livestock permittee would maintain “Grazing Records” that document the number of animals and the number of days that livestock are grazed in each treatment area throughout

the year. Records would also indicate level of use, rainfall, temperature and any other relevant range condition information.

Grazing records are useful for planning livestock moves, evaluating why changes on occurring on the landscape and they are useful in fine-tuning management decisions for future planning. The livestock permittee would maintain “grazing records” of the number of livestock, days in each treatment area, condition of range and weather related information. Data would be summarized on the form “Grazing Plan & Control Chart” at the end of the grazing season.

An annual Plan of Operations would be developed with the livestock permittee and approved each year by the Ukiah Office Field Manager and Cache Creek Natural Area Manager.

Grazing would be authorized under free-use permit issued for 1 year for the primary purpose of controlling noxious weeds (43CFR 4130.5(b) (3)). It is anticipated that the permit would be reissued for 3 to 5 years.

The following Terms and Conditions would be included in the free-use permit:

1. Grazing would begin approximately November 15 and end approximately mid- May to mid-June.
2. Permittee would provide a range rider for 6 days a week. Range rider is responsible for maintaining livestock in appropriate areas and maintaining fencing. Livestock are not allowed on the adjacent CDFG Cache Creek Wildlife Area, Blue Ridge (between Lynch Canyon and Bear Creek), Cache Creek, Bear Creek, and portions of Thompson Canyon.
3. Permittee would provide all electric fence materials except for the electric fence charger, which BLM would provide. Electric fencing would have caution signs near trails. BLM and permittee would cooperate on the maintenance of the corrals located at Highways 16 and 20.
4. Treatment areas would be grazed up to 14 days depending on forage availability and size of the treatment area.
5. No grazing is allowed in burned and seeded areas for 2 growing seasons.
6. Permittee would not interfere with hunters or recreationists.
7. Permittee may use vehicles in the area until fall precipitation begins. After beginning precipitation only ATV's or horses may be used. If drying occurs the permittee must contact Cache Creek Natural Area Manager for approval to use vehicles.
8. All vehicles and ATV's must be identified with BLM Permittee signs.
9. Vehicles are for the performance of official duties - no hunting or fishing. No extraneous ATV/Off Road Vehicle Use.
10. Permittee must maintain locked gate closure. Gates would be locked on every entry and departure. Permittee is responsible to contact BLM regarding combination changes at locked gates.
11. It is illegal to bring into the United States, to transport or harbor aliens who do not have a proper visa for entry and working in the country (U.S.C. 1323-

1325). If suspect violation occurs during the performance of work on this permit, it would be reported to the U.S. Immigration and Naturalization Service for investigation and appropriate action.

12. There would be no dumping of trash, waste/hazardous material, and/or burned material onto the public lands.
13. Salt would be the only supplement used. Location of salt supplements would be determined by the permit applicant and BLM specialist(s). No salt locations would be closer than ¼ mile to riparian areas and/or water sources.

Alternative 6: Biological Controls

The use of biological controls would be utilized to decrease the amount of yellow starthistle. The false peacock fly (*Chaetorellia succinea*) has been found naturally occurring within the project area and would be used as a biological control method. Biological controls are not yet available for medusahead or barbed goatgrass.

Actions Common to All Alternatives:

I. Monitoring Plan.

To determine if objectives are being met, trend monitoring using established photo points would be incorporated into the project to document changes in population density of key indicator and target weed species. Monitoring would cover presence/absence of individuals of key and target species in different size classes; rough categorical estimate of the percent of plants in each size class; and condition of individual plants at given locations. Other BLM approved monitoring techniques such as clipping and estimating residual dry matter may be considered in addition to photo points. The project area would be monitored annually by BLM specialists who would report their findings to the Field Manager. BLM specialists' and Field Manager's concurrence would determine the need for any further treatment. It is anticipated that a minimum of five years of treatment would be needed to have an effect on the weed populations.

A combination of monitoring methods would be used to evaluate the effects of noxious weed treatment including:

A. Ranch photo monitoring.

Photo points along the main ranch roads would be established. A photo record of the ranch along an established route would be made in the spring and fall of each year. Other photos, such as ponds and burned areas would be cataloged. Photo points would be GPS located and displayed on the project area map.

The use of photography would be used to qualitatively document how vegetation communities change over time. General view photographs of the landscape would be taken from a permanent reference point to detect changes in the vegetation composition and structure and for visually monitoring changes in the landscape. Photo points along the main ranch roads would be established, their locations would be GPS located, permanent markers would be set and maps prepared to show their locations. Photographs would be taken in the spring and fall of each year.

Procedures:

- Take at least one digital photo at each site. The picture should include landscape features such as trees, rocks, fence posts or mountain features that can be identified

in future years. Photo should be date stamped, GPS location marked and direction of view (compass heading) described.

- A second photo would be taken to show the soil surface characteristic and amount of ground surface cover.
- Digital pictures would be printed and stored in plastic photo storage sheets and chronologically filed in the CCNA Range Monitoring binder.
- When repeat pictures are taken, every effort would be made to include the same area and landmarks that were included in the original picture.

B. Grassland monitoring.

The proposed treatment areas would be mapped to locate invasive weed populations and also identify established perennial grass sites. At least 6 permanent line transects would be established in key areas and monitored each year in the spring (May). Control sites (non-treated areas) would be established to compare the effects of treatment vs. non-treatment on invasive weeds and perennial grasses. Monitoring sites would be located with a GPS unit and maps would be prepared showing where the line transects are established. Exclosures would be installed at each site to help identify plant species and measure total plant production.

Plant production and density monitoring would be used to quantify noxious invasive weed species and native perennial grasses changes over time. Data would be collected on ground cover, plant composition by weight and perennial grass species density, age class and condition.

Procedures:

- Establish 6 treated and 3 non-treated representative sites to be monitored. Each site would be marked with a post at each end to establish the boundary of the line transect, GPS located and printed on the ranch map. Site descriptions, soils and history would be recorded for each site. (Reference pages 35 & 36).
- Total annual production by weed species, perennial grasses and other species would be measured at the end of the treatment period. At least 10 samples would be collected at each location along the line transect following the standard USDA-NRCS national protocols. (Reference pages 51-56)
- Perennial grass density, age class & form would also be evaluated at each site (Reference page 79) following a modified data collection worksheet described in “Early Warning Biological Monitoring – Rangeland & Grasslands”, Center for Holistic Management.
- Residual Dry Matter (RDM) estimates and maps will be made at the beginning of each vegetation growing season (late September or early October).
- Data collected, would be summarized, analyzed and interpreted annually to evaluate progress towards weed management goals and determine if adjustments to treatments are needed.

C. Oak Regeneration monitoring.

At least three oak regeneration transects would be established to determine if enough oak seedlings are reaching the mature state. The density and size of oak trees would be measured and evaluated. Method to be used is extracted from the USFS Forest Inventory and Analysis (FIA) National Core Field Guide, Volume I: Field Data Collection Procedure for Phase 2 Plots. (Refer to pages 65-68).

II. Impacts

The expected result of reducing populations of the yellow starthistle, medusahead and barbed goatgrass from all the alternatives mentioned previously would be a similar reduction in weed seed production. Furthermore with weed species reduced, there would be more opportunity for native plants to re-establish themselves. All methods of weed reduction proposed including prescribed burning, use of herbicides, mowing, hand pulling, prescribed grazing, and biological control as part of an overall Integrated Weed Management Plan.

Environmental Impacts

No-Action Alternative

Critical Element	Affected? yes no		Critical Element	Affected? yes no	
Air Quality (CAA, 1955) Frank Arriaza		X	T&E Species (ESA, 1973) Gregg Mangan/Pardee Bardwell		X
Water Quality (Surface and Ground; SDWA amend 1996, CWA 1987, EO=s 12580, 12088, 12372) Frank Arriaza		X	ACEC's (FLPMA, 1976) Gregg Mangan		X
Wetlands/Riparian Zone (EO-11990) Frank Arriaza	X		Wastes, Hazardous/Solid (RCRA, 1976; CERCLA, 1980) Doug Prado		X
Floodplains (EO-11988) Frank Arriaza		X	Farm Lands (SMARA, 1977) Frank Arriaza		X
Environmental Justice (EO-12898) Yolanda Chavez		X	Wilderness (FLPMA, 1976; WA, 1964) Jonna Hildenbrand		X
Native American Concerns (AIRFA, 1978) Yolanda Chavez		X	Wild and Scenic Rivers (W&SRA, 1968) Jonna Hildenbrand		X
Cultural Resources (NHPA, 1966) Yolanda Chavez		X	Invasive, Non-Native Species (Lacey Act, Federal Noxious Weed Act of 1974) Pardee Bardwell	X	

Describe the impacts (direct, indirect, and cumulative), if any, to all resources. If a yes box is checked in the Critical Element table, explain how the Critical Element is affected:

1. Air Quality: Not affected. No noxious weed control would take place.
2. T&E Species: Not affected. No noxious weed control would take place.
3. Water Quality: Not affected. No noxious weed control would take place.
4. ACEC's: Not affected.
5. Wetlands/Riparian Zone: Affected. No noxious weed control would take place. Tamarisk and perennial pepperweed would increase in the riparian areas.
6. Hazardous & Solid Wastes: Not affected.
7. Floodplains: Not affected. No livestock grazing would take place. Yellow starthistle, medusahead and barbed goatgrass provide good ground cover and prevents splash erosion. By not removing these species, the dense ground cover that they provide would remain.
8. Farm Lands: Not affected. No farms lands are present.

9. Environmental Justice: Not affected. No low-income or minority populations are living on or near the area as defined in Executive Order 12898.
10. Wilderness: Not affected. No noxious weed control would take place.
11. Native American Religious Concerns: Not affected. No noxious weed control would take place. The Patwin people would see non-native species continue to spread.
12. Wild and Scenic Rivers: Not affected.
13. Cultural Resources: Not affected. No noxious weed control would take place.
14. Invasive, Non-Native Species: Affected. Under the no action alternative, yellow starthistle, medusahead, and barbed goatgrass, non-native exotic species, would not be removed and would increase in population.
15. Soil: Not affected. The potential compaction of soils would not occur. By not removing yellow starthistle, barbed goatgrass, and medusahead the dense ground cover that these species provide would remain, preventing soil (splash) erosion.
16. Vegetation: Affected. No action would allow weed populations to continue to proliferate unimpeded and would continue to out-compete native species.
17. Recreation: Affected. Recreational use in certain areas could be impeded by excessive growth of noxious weeds. Yellow starthistle deters recreational use by equestrian riders and hikers.
18. Wildlife: Affected. Forage conditions for a variety of wildlife species such as the tule elk, blacktail deer, and wild turkey would continue to decline as noxious weeds continue to spread.

Alternative 1: Prescribed Fire

Critical Element	Affected? yes no		Critical Element	Affected? yes no	
Air Quality (CAA, 1955) Frank Arriaza	X		T&E Species (ESA, 1973) Gregg Mangan/Pardee Bardwell		X
Water Quality (Surface and Ground; SDWA amend 1996, CWA 1987, EO=s 12580, 12088, 12372) Frank Arriaza		X	ACEC's (FLPMA, 1976) Gregg Mangan		X
Wetlands/Riparian Zone (EO-11990) Frank Arriaza		X	Wastes, Hazardous/Solid (RCRA, 1976; CERCLA, 1980) Doug Prado		X
Floodplains (EO-11988) Frank Arriaza	X		Farm Lands (SMARA, 1977) Frank Arriaza		X
Environmental Justice (EO-12898) Yolanda Chavez		X	Wilderness (FLPMA, 1976; WA, 1964) Jonna Hildenbrand		X
Native American Concerns (AIRFA, 1978) Yolanda Chavez		X	Wild and Scenic Rivers (W&SRA, 1968) Jonna Hildenbrand		X
Cultural Resources (NHPA, 1966) Yolanda Chavez	X		Invasive, Non-Native Species (Lacey Act, Federal Noxious Weed Act of 1974) Pardee Bardwell	X	

Describe the impacts (direct, indirect, and cumulative), if any, to all resources. If a yes box is checked in the Critical Element table, explain how the Critical Element is affected:

1. Air Quality: Affected. There would be a temporary impact to local air quality during project implementation. This impact would be most noticeable by travelers along Highways 16 and 20 during firing operations. This impact would be mitigated by coordinating this burn with the Colusa County Air Quality Management District.
2. T&E Species: Not affected. Sensitive species are associated with the riparian area which would not be burned.
3. Water Quality: Not affected. With the temporary loss or ground cover a negligible amount soil particles may move into water courses. This not considered significant due to the level terrain.
4. ACEC's: Not affected. The prescribed burn area is not in an ACEC.
5. Wetlands/Riparian Zone: Not affected. The riparian zone would not be in the prescribed burn area.
6. Hazardous & Solid Wastes: Not affected. No hazardous or solid wastes are present.
7. Floodplains: Affected. With the temporary loss of ground cover, soil particles may move into water courses. This is not considered significant due to the level terrain. There would

be no below-ground disturbance. Removing the barbed goatgrass, tamarisk and yellow starthistle may cause some limited amount of erosion until native grasses, rushes, and sedges are able to colonize the sites where these species have been removed.

8. Farm Lands: Not affected. None present.

9. Environmental Justice: Not affected. No low-income or minority populations are living on or near the area as defined in Executive Order 12898.

10. Wilderness: Not affected: Legislation introduced in March, 2003 incorporated the Lake County portion of the Payne Ranch acquisition within the Cache Creek Natural Area for proposed wilderness designation. Those acquired lands within Lake County are excluded from the project area.

11. Native American Religious Concerns: Not affected.

12. Wild and Scenic Rivers: Not affected. No wild or scenic rivers are in the project area.

13. Cultural Resources: Affected. Given the nature of the project, adverse effects to the sites are not expected from burning. However, proposed disking and fire line construction activities could have an adverse effect. As such, it is recommended that both of these activities be avoided within site boundaries. The Fire Management Officer (FMO) and project supervisor should work closely with the staff Archaeologist and Tribal representatives to ensure avoidance of ground disturbing activities within site boundaries. For example, fireline construction near the Craig Canyon Mouth Site (see attached map), should be redesigned prior to project implementation to ensure avoidance of impacts to the site. The FMO, project supervisor and archaeologist should also flag and field check each area of proposed disturbance prior to project implementation.

Based on existing data, the Cache Creek Natural Area, including the Bear Creek Canyon, should be considered highly sensitive in terms of archaeological resources. While the project area has been inventoried, there is potential that ground disturbing activities could unearth previously undocumented cultural remains. It is therefore recommended that the staff Archaeologist, a Native American representative or a trained archaeological technician be present during all ground disturbing activities. These recommended actions would prevent an adverse effect to the sites.

14. Invasive, Non-Native Species: Affected. This project would significantly reduce the amount of yellow starthistle, and medusahead, both non-native exotic species. The effects of prescribe burning on barbed goatgrass appears to be insignificant.

15. Soils: Affected. There would be a temporary reduction in soils biota, as well as organic materials and humus as a result of a prescribed burn.

16. Vegetation: Affected. Medusahead and yellow starthistle populations would be reduced through prescribe burning. No action would allow weed populations to continue to proliferate unimpeded and would continue to out-compete native species. Other species in the burn area have gone dormant or completed their life cycle by the proposed burning date. Perennials such as purple needlegrass and saltgrass would also be burned but would recover due to their extensive root systems and regrowth would occur shortly after the burn. Some mortality to blue oak seedlings can be expected.

17. Recreation: Affected. Public use of the project area would be affected during prescribed burning operations. The area would be closed to all public use during the day(s) of prescribed fire treatment. There would be signs placed at access points notifying the public why the area is temporarily closed. Yellow starthistle deters recreational use by equestrian riders and hikers. Dense stands of yellow starthistle would be reduced allowing recreational use in those areas.

18. Wildlife: Affected. Larger species of wildlife such as tule elk and blacktail deer would temporarily avoid the area that is being treated with fire. Smaller less mobile species of wildlife such as reptiles and small rodents could suffer mortality if they are not able to escape faster-moving flames. Within a week or so after burning, vegetation will begin to resprout, resulting in improved forage conditions for a variety of wildlife.

Alternative 2: Use of Herbicides

Critical Element	Affected?		Critical Element	Affected?	
	yes	no		yes	no
Air Quality (CAA, 1955) Frank Arriaza		X	T&E Species (ESA, 1973) Gregg Mangan/Pardee Bardwell		X
Water Quality (Surface and Ground; SDWA amend 1996, CWA 1987, EO=s 12580, 12088, 12372) Frank Arriaza		X	ACEC's (FLPMA, 1976) Gregg Mangan		X
Wetlands/Riparian Zone (EO-11990) Frank Arriaza		X	Wastes, Hazardous/Solid (RCRA, 1976; CERCLA, 1980) Doug Prado	X	
Floodplains (EO-11988) Frank Arriaza		X	Farm Lands (SMARA, 1977) Frank Arriaza		X
Environmental Justice (EO-12898) Yolanda Chavez		X	Wilderness (FLPMA, 1976; WA, 1964) Jonna Hildenbrand		X
Native American Concerns (AIRFA, 1978) Yolanda Chavez		X	Wild and Scenic Rivers (W&SRA, 1968) Jonna Hildenbrand		X
Cultural Resources (NHPA, 1966) Yolanda Chavez			Invasive, Non-Native Species (Lacey Act, Federal Noxious Weed Act of 1974) Pardee Bardwell	X	

Describe the impacts (direct, indirect, and cumulative), if any, to all resources. If a yes box is checked in the Critical Element table, explain how the Critical Element is affected:

1. Air Quality: Not affected.
2. T&E Species: Not affected. Bald Eagles are yearlong residents on Cache Creek. They are occasionally seen in Bear Creek Drainage in the winter in the gray pines adjacent to the creeks and riparian areas.
3. Water Quality: Not affected. Pesticide would not be used within 10 feet of water.
4. ACEC's: Not affected. The project is not in an ACEC.
5. Wetlands/Riparian Zone: Not Affected. The pesticide would be applied 10 feet from water. Pesticide is currently being used to reduce tamarisk on Bear Creek. Yellow starthistle is generally not located in riparian (wet) areas.
6. Hazardous & Solid Wastes: Affected. Stalker, Habitat, Roundup and Transline are hazardous products. In the event of a spill, the BLM or BLM's contractor would properly remove and dispose of any contaminated soil. The contractor would assume all expenses relating the needed clean-up and disposal. The contractor would provide BLM with a spill contingency plan. The plan would include approved facility for disposal. The BLM contractor would notify BLM immediately of the location and size of the spill.

7. Floodplains: Affected: Barbed goatgrass, tamarisk and yellow starthistle would be reduced in meadows, flood plains and terraces. There would be no below-ground disturbance. Removing the barbed goatgrass, tamarisk and yellow starthistle may cause some limited amount of erosion until native grasses, rushes, and sedges are able to colonize the sites where these species have been removed.

8. Farm Lands: Not affected. No farm lands are proposed for pesticide application.

9. Environmental Justice: Not affected. No low-income or minority populations are living on or near the area as defined in Executive Order 12898.

10. Wilderness: Not affected: Legislation introduced in March, 2003 incorporated the Lake County portion of the Payne Ranch acquisition within the Cache Creek Natural Area for proposed wilderness designation. These acquired lands within Lake County are excluded from the project area.

11. Native American Religious Concerns: Not affected. This project would reduce and remove non-native exotic species. The Patwin people have been consulted regarding this project, and are in support of BLM efforts to reduce noxious weed populations.

12. Wild and Scenic Rivers: Not affected. No wild or scenic rivers are in the project area.

13. Cultural Resources: Not affected. No ground disturbance would occur during the spraying. There would be slight ground compaction from ATV use.

14. Invasive, Non-Native Species: Affected. Pesticide use would reduce or remove barbed goatgrass yellow starthistle, perennial pepperweed and tamarisk.

15. Soil: Affected. Pesticides may remain in the soil for 7 to 287 days before being broken down by soil microbial activity. Soil microorganisms would break down the pesticides which may increase carbon dioxide in the soil.

16. Vegetation: Affected. Yellow starthistle and barbed goatgrass populations would be reduced through use of pesticides. No action would allow weed populations to continue to proliferate unimpeded and would continue to out compete native species. Other species near the target species may be reduced by the pesticide use.

17. Recreation: Affected. Herbicide application would only occur on weekdays when public use is much lower. If users are out on weekdays when herbicides would be applied, the treated areas would be temporarily unavailable for use until herbicide application is completed. Yellow starthistle deters recreational use by equestrian riders and hikers. Dense stands of yellow starthistle would be reduced allowing recreational use in those areas.

18. Wildlife: Affected. Larger species of wildlife such as tule elk and blacktail deer would temporarily avoid the area that is being treated with herbicides. There would be a minimum 10-foot buffer from water, making any impacts to fish and amphibians negligible.

Alternative 3: Mowing

Critical Element	Affected? yes no		Critical Element	Affected? yes no	
Air Quality (CAA, 1955) Frank Arriaza		X	T&E Species (ESA, 1973) Gregg Mangan/Pardee Bardwell		X
Water Quality (Surface and Ground; SDWA amend 1996, CWA 1987, EO=s 12580, 12088, 12372) Frank Arriaza		X	ACEC's (FLPMA, 1976) Gregg Mangan		X
Wetlands/Riparian Zone (EO-11990) Frank Arriaza		X	Wastes, Hazardous/Solid (RCRA, 1976; CERCLA, 1980) Doug Prado		X
Floodplains (EO-11988) Frank Arriaza		X	Farm Lands (SMARA, 1977) Frank Arriaza		X
Environmental Justice (EO-12898) Yolanda Chavez		X	Wilderness (FLPMA, 1976; WA, 1964) Jonna Hildenbrand		X
Native American Concerns (AIRFA, 1978) Yolanda Chavez		X	Wild and Scenic Rivers (W&SRA, 1968) Jonna Hildenbrand		X
Cultural Resources (NHPA, 1966) Yolanda Chavez		X	Invasive, Non-Native Species (Lacey Act, Federal Noxious Weed Act of 1974) Pardee Bardwell	X	

Describe the impacts (direct, indirect, and cumulative), if any, to all resources. If a yes box is checked in the Critical Element table, explain how the Critical Element is affected:

1. Air Quality: Not affected. Dust would be present in the air for a short period of time.
2. T&E Species: Not affected. Sensitive species are associated with the riparian areas which would not be mowed.
3. Water Quality: Not affected. Mowing leaves stubble, which would hold particles and prevents movement of the particles into water courses.
4. ACEC's: Not affected. The project area is not in an ACEC.
5. Wetlands/Riparian Zone: Not affected. Mowing would not take place in the riparian area.
6. Hazardous & Solid Wastes: Not affected. The only hazardous waste present would be petroleum products associated with the fueling and servicing of the mower. If a spill occurs during fueling the soil would be scraped up and bagged and disposed appropriately.

7. Floodplains: Not affected. Mowing would occur on the flood plains. Mowing leaves stubble which would hold particles and prevents movement of particles into water courses.

8. Farm Lands: Not affected. No farm lands are present.

9. Environmental Justice: Not affected. No low-income or minority populations are living on or near the area as defined in Executive Order 12898.

10. Wilderness: Not affected: Legislation introduced in March, 2003 incorporated the Lake County portion of the Payne Ranch within the Cache Creek Natural Area for proposed wilderness designation. The Payne Ranch lands within Lake County are excluded from the project area. Mowing would reduce weed populations, however mowing would create a visual impact in the natural area for a short term while lines from mowing can be seen.

11. Native American Religious Concerns: Not affected. The Patwin people, including Cortina and Rumsey Rancherias have been consulted regarding this project. They are in support of BLM efforts to reduce noxious weed populations.

12. Wild and Scenic Rivers: Not affected. No wild or scenic rivers are in the project area.

13. Cultural Resources: Not affected. No ground disturbance would occur within known archaeological sites. The mower action would be above ground and leave stubble. Negligible soil compaction may be noted from the mower tires.

14. Invasive, Non-Native Species: Affected. This project would reduce the amount of yellow starthistle, medusahead, and barbed goatgrass, all non-native exotic species.

15. Soils: Not affected. Negligible soil compaction may be noted from the mower tires.

16. Vegetation: Perennials such as purple needlegrass and other non-target vegetation would also be mowed but would recover due to extensive root systems. Regrowth would occur shortly after the mowing.

17. Recreation: Affected. There may be a short period during mowing operations when users will need to avoid the area of mowing activity. Yellow starthistle deters recreational use by equestrian riders and hikers. Dense stands of yellow starthistle would be reduced allowing recreational use in those areas.

18. Wildlife: Affected. Larger species of wildlife such as tule elk and blacktail deer would temporarily avoid the area that is being mowed. Some of the smaller wildlife species including rodents and reptiles may be killed by the action of the mower.

Alternative 4: Hand Pulling

Critical Element	Affected?		Critical Element	Affected?	
	yes	no		yes	no
Air Quality (CAA, 1955) Frank Arriaza		X	T&E Species (ESA, 1973) Gregg Mangan/Pardee Bardwell		X
Water Quality (Surface and Ground; SDWA amend 1996, CWA 1987, EO=s 12580, 12088, 12372) Frank Arriaza		X	ACEC's (FLPMA, 1976) Gregg Mangan		X
Wetlands/Riparian Zone (EO-11990) Frank Arriaza		X	Wastes, Hazardous/Solid (RCRA, 1976; CERCLA, 1980) Doug Prado		X
Floodplains (EO-11988) Frank Arriaza		X	Farm Lands (SMARA, 1977) Frank Arriaza		X
Environmental Justice (EO-12898) Yolanda Chavez		X	Wilderness (FLPMA, 1976; WA, 1964) Jonna Hildenbrand		X
Native American Concerns (AIRFA, 1978) Yolanda Chavez		X	Wild and Scenic Rivers (W&SRA, 1968) Jonna Hildenbrand		X
Cultural Resources (NHPA, 1966) Yolanda Chavez		X	Invasive, Non-Native Species (Lacey Act, Federal Noxious Weed Act of 1974) Pardee Bardwell	X	

Describe the impacts (direct, indirect, and cumulative), if any, to all resources. If a yes box is checked in the Critical Element table, explain how the Critical Element is affected:

1. Air Quality: Not affected.
2. T&E Species: Not affected.
3. Water Quality: Not affected.
4. ACEC's: Not affected.
5. Wetlands/Riparian Zone: Not affected.
6. Hazardous & Solid Wastes: Not affected.
7. Floodplains: Not affected.
8. Farm Lands: Not affected.
9. Environmental Justice: Not affected.
10. Wilderness: Not affected

11. Native American Religious Concerns: Not affected. The Patwin people, including Cortina and Rumsey Rancherias have been consulted regarding this project. They are in support of BLM efforts to reduce noxious weed populations.

12. Wild and Scenic Rivers: Not affected.

13. Cultural Resources: Not affected. No ground disturbance would occur within known archaeological sites.

14. Invasive, Non-Native Species: Affected. This project would reduce the amount of yellow starthistle, medusahead, and barbed goatgrass, within the sites targeted for pulling.

15. Soils: Not affected. Negligible soil compaction may be noted from the effects of workers pulling weeds.

16. Vegetation: Not affected. The only vegetative species targeted for pulling are medusahead, yellow starthistle, tamarisk seedlings and barbed goatgrass. Other vegetation within the project area would not be affected.

17. Recreation: Not Affected.

18. Wildlife: Affected. Most wildlife species would temporarily avoid the area where workers are pulling weeds.

Alternative 5 (Proposed Action): Prescribed grazing

Critical Element	Affected? yes no		Critical Element	Affected? yes no	
Air Quality (CAA, 1955) Frank Arriaza		X	T&E Species (ESA, 1973) Gregg Mangan/Pardee Bardwell		X
Water Quality (Surface and Ground; SDWA amend 1996, CWA 1987, EO=s 12580, 12088, 12372) Frank Arriaza	X		ACEC's (FLPMA, 1976) Gregg Mangan		X
Wetlands/Riparian Zone (EO-11990) Frank Arriaza	X		Wastes, Hazardous/Solid (RCRA, 1976; CERCLA, 1980) Doug Prado	X	
Floodplains (EO-11988) Frank Arriaza		X	Farm Lands (SMARA, 1977) Frank Arriaza		X
Environmental Justice (EO-12898) Yolanda Chavez		X	Wilderness (FLPMA, 1976; WA, 1964) Jonna Hildenbrand		X
Native American Concerns (AIRFA, 1978) Yolanda Chavez		X	Wild and Scenic Rivers (W&SRA, 1968) Jonna Hildenbrand		X
Cultural Resources (NHPA, 1966) Yolanda Chavez	X		Invasive, Non-Native Species (Lacey Act, Federal Noxious Weed Act of 1974) Pardee Bardwell	X	

Describe the impacts (direct, indirect, and cumulative), if any, to all resources. If a yes box is checked in the Critical Element table, explain how the Critical Element is affected:

Planned short duration rotational livestock grazing - Description of Impacts:

1. Air Quality: Not affected. Livestock emit some gas.
2. T&E Species: Not affected. Bald Eagles are year-round residents on Cache Creek. They are occasionally seen in Bear Creek Drainage in the winter in the gray pines adjacent to the creeks and riparian areas. The foothill yellow-legged frog (*Rana boylei*), BLM sensitive species, and northwestern pond turtle (*Clemmys marmorata marmorata*), Federal species of concern, are found in the riparian areas and stock ponds. These species would not be affected by short duration rotational grazing.
3. Water Quality: Affected. A slight or negligible affect from livestock defecating in the riparian areas such as ponds and ephemeral drainages would be noted until the waste decomposes. See #2 and #5. Livestock will not be allowed access to the major riparian areas including those found along Cache Creek, Bear Creek, and in Thompson Canyon.
4. ACEC's: Not affected. The project area is not within the Cache Creek ACEC.
5. Wetlands/Riparian Zone: Affected. Livestock will not be allowed access to the major riparian areas including those found along Cache Creek, Bear Creek, and in Thompson Canyon. Livestock use near ponds and ephemeral water sources would be short duration,

resulting in temporary minor impacts. Livestock would not need to depend upon the riparian area for green forage since the uplands would still be green and have sufficient forage value during the majority proposed grazing period. Seasonal dry periods can occur during November and May.

6. Hazardous & Solid Wastes: Affected. Livestock would defecate and urinate in those treatment areas where grazing is occurring. This would be concentrated for a short period of time, not to exceed 14 consecutive days. Fecal matter would break down over time.

7. Floodplains: Not affected. Grazing would not occur on the flood plains.

8. Farm Lands: Not affected. No farm lands are present.

9. Environmental Justice: Not affected. No low-income or minority populations are living on or near the area as defined in Executive Order 12898.

10. Wilderness: Not affected: Legislation introduced in March, 2003 incorporated the Lake County portion of the Payne Ranch acquisition within the Cache Creek Natural Area for proposed wilderness designation. Those acquired lands within Lake County are excluded from the project area.

11. Native American Religious Concerns: Not affected. The Patwin people, including Cortina and Rumsey Rancherias have been consulted regarding this project. They are in support of BLM efforts to reduce noxious weed populations. Known sacred sites including burials are excluded from grazing in the Proposed Action.

12. Wild and Scenic Rivers: Not affected. No wild or scenic rivers are in the project area.

13. Cultural Resources: Affected. Known archaeological sites will be excluded from grazing. These include sites found along Bear Creek and in Thompson Canyon. It is possible that previously-undiscovered sites may incur short-term impacts from grazing. The short duration grazing ensures that livestock will not remain in any particular treatment area longer than 14 consecutive days. Coordination with the Ukiah Field office Archaeologist will be necessary.

14. Invasive, Non-Native Species: Affected. This project would reduce the amount of yellow starthistle, medusahead, and barbed goatgrass, all non-native exotic species. The Proposed Action is expected to reduce the amount of medusahead thatch which impedes the reproduction of other desirable native species.

15. Soils: Affected. There would be a temporary reduction in soils biota, as well as organic materials and humus as a result of the short duration livestock grazing. Soil compaction could occur during wet periods.

16. Vegetation: Affected. The proposed action is to reduce weed populations and thatch through the use of livestock grazing. Livestock would also utilize other species such as soft chess, nitgrass and oatgrass. The livestock would also utilize more desirable species such as purple needlegrass, salt grass and occasionally blue oak seedlings. There will be some vegetation trampling from the high intensity, short duration grazing, however this grazing scheme ensures that livestock will not remain in any particular treatment area longer than 14 consecutive days.

17. Recreation: Affected. Public use of the project area would be affected by those users who want a recreational experience without the presence of livestock. The Proposed Action includes placement of signs at visitor access points informing the public what specific treatment areas are currently being grazed, enabling those who want to avoid these areas go elsewhere.

Yellow starthistle deters recreational use by equestrian riders and hikers. Dense stands of yellow starthistle would be reduced allowing recreational use in those areas.

18. Wildlife: Affected. There would be competition for forage with wildlife species in those areas where livestock are concentrated for short durations. The mere presence of a large number of livestock would also likely deter some wildlife species from these areas. Tule elk, a high-profile species that occurs within the project area, are also grazers and would compete for some of the forage species that livestock are feeding on. However, livestock would be confined to specific areas with electric fencing, and the elk will likely move to other areas away from the livestock.

The Proposed Action involves the use of a single strand of electric fencing 32" high. It is possible that there could be some elk damage to this fenceline; however it is anticipated to be minor, as elk can easily maneuver over or under a single strand of wire. If any damage to fencelines does occur, the on-site herder would be available to make necessary repairs.

Alternative 6: Biological Control

Critical Element	Affected?		Critical Element	Affected?	
	yes	no		yes	no
Air Quality (CAA, 1955) Frank Arriaza		X	T&E Species (ESA, 1973) Gregg Mangan/Pardee Bardwell		X
Water Quality (Surface and Ground; SDWA amend 1996, CWA 1987, EO=s 12580, 12088, 12372) Frank Arriaza		X	ACEC's (FLPMA, 1976) Gregg Mangan		X
Wetlands/Riparian Zone (EO-11990) Frank Arriaza		X	Wastes, Hazardous/Solid (RCRA, 1976; CERCLA, 1980) Doug Prado		X
Floodplains (EO-11988) Frank Arriaza	X		Farm Lands (SMARA, 1977) Frank Arriaza		X
Environmental Justice (EO-12898) Yolanda Chavez		X	Wilderness (FLPMA, 1976; WA, 1964) Jonna Hildenbrand		X
Native American Concerns (AIRFA, 1978) Yolanda Chavez		X	Wild and Scenic Rivers (W&SRA, 1968) Jonna Hildenbrand		X
Cultural Resources (NHPA, 1966) Yolanda Chavez		X	Invasive, Non-Native Species (Lacey Act, Federal Noxious Weed Act of 1974) Pardee Bardwell	X	

Describe the impacts (direct, indirect, and cumulative), if any, to all resources. If a yes box is checked in the Critical Element table, explain how the Critical Element is affected:

Biological Control Alternative - Description of Impacts:

1. Air Quality: Not affected.
2. T&E Species: Not affected.
3. Water Quality: Not affected.
4. ACEC's: Not affected. The project area is not in an ACEC.
5. Wetlands/Riparian Zone: Not affected.
6. Hazardous & Solid Wastes: Not affected.
7. Floodplains: Affected. Flood plains may be affected if one of the predators to yellow starthistle becomes established and can significantly lower the population. To date the effects have negligible.
8. Farm Lands: Not affected. No farm lands are present.
9. Environmental Justice: Not affected. No low-income or minority populations are living

on or near the area as defined in Executive Order 12898.

10. Wilderness: Not affected: Legislation introduced in March, 2003 incorporated the Lake County portion of the Payne Ranch within the Cache Creek Natural Area for proposed wilderness designation. The Payne Ranch lands within Lake County are excluded from the project area.

11. Native American Religious Concerns: Not affected. The Patwin people, including Cortina and Rumsey Rancherias have been consulted regarding this project. They are in support of BLM efforts to reduce noxious weed populations.

12. Wild and Scenic Rivers: Not affected. No wild or scenic rivers are in the project area.

13. Cultural Resources: Not affected. No ground disturbance would occur within known archaeological sites.

14. Invasive, Non-Native Species: Affected. Yellow starthistle may be affected if one of the insect predators to yellow starthistle becomes established and can significantly lower the population. To date the effects have negligible.

15. Soils: Not affected. Biological controls would have no effects on soils.

16. Vegetation: Not Affected. Yellow starthistle is the only plant species in the project area that would be affected by biological controls. There are no biological controls yet available for medusahead or barbed goatgrass. Nontarget plants would not be affected.

Summary Comparison of Alternatives

Prescribed Fire

As a weed management tool, fire is effective where probability of positive impacts to target species (starthistle, medusahead, and barbed goatgrass) is high and its risk to key indicator species is low (blue oaks and purple needlegrass). Fire is cost effective in areas where fuel breaks and control lines can be easily installed. Fire works well in large blocks where the landscape is uniform and the terrain is not steep.

Herbicides

Using of herbicide sprays works well in small blocks of land with gentle topography that have dense populations of weeds.

Mowing

Mowing with flail or rotary mowers works well in areas with gentle topography, that are relatively free of rock, and have dense populations of weeds.

Hand pulling

Using crews is effective with small populations where individual plants are targeted for removal.

Prescription Grazing

Using of livestock for weed eradication and thatch reduction that protects weeds and inhibits native species is effective over large landscapes of diverse terrain. Of the alternatives evaluated in this Environmental Assessment for noxious weed reduction over a variety of terrain, prescription grazing offers the best possibility for the highest degree of success. It is therefore the Proposed Action in this EA.

Biological Controls

For the three major noxious weeds species that BLM plans to treat within the project area, biological controls are only available for yellow starthistle. To date there has been limited success with the results being localized in very small areas.

Mitigation Measures: Practices and procedures designed to keep impacts to a minimum have been incorporated into the proposed action.

Residual Impacts: It is expected that as barbed goatgrass, medusahead and yellow starthistle is reduced more native species will re-establish themselves in the area.

Cumulative Impacts: Table 1 on page 3 shows a summary of vegetation management and weed eradication projects undertaken in the area.

People/Agencies Contacted:

Scott Koller	California Department of Fish and Game
Terry Palmisano	California Department of Fish & Game
Ray Krauss	Blue Ridge Berryessa Natural Area
Jim Eaton	California Wilderness Coalition
Doug White	Colusa County BOS
Jeff Smith	Lake County BOS
Craig Thomsen	Department of Agronomy and Range Science, U.C. Davis.
Chet Vogt	Grazing interests
Dennis Nay	Natural Resources Conservation Service

Preparer Signature Sheet

(Each Preparer should sign off on this sheet when they are satisfied with the EA)

Project: Payne Ranch Oak-Grassland Weed Control Project.

Preparing Office: Ukiah Field Office

Project Leader: Pardee Bardwell

Title: Rangeland Management Specialist

List of Reviewers:

Position	Signature	Position	Signature
Biology, Forest Plan, and Rangeland Management	Pardee Bardwell	Soil, Water, and Air Specialist	Frank Arriaza
Realty Specialist	Alice Vigil	Operations (if construction required)	Steve Myers
Archaeologist	(Yolanda Chavez)	Engineering and Rights-of-Way (if construction or R/W required)	Bill Dabbs
Fire/Fuels	Jim Dawson	Geologist	(vacant)
Cache Creek Natural Area Manager (sign for CCNA projects only)	Gregg Mangan	Hazardous Materials	(Doug Prado)
Recreation Planner and Visual Resources Mgmt.	Jonna Hildenbrand	Law Enforcement Supervisor	Walt Gabler
OHV Recreation Planner	Jonna Hildenbrand	Energy (sign for energy projects only)	Rich Estabrook
Pesticides (sign for pesticide projects only)	Tobey Ringuette	blank	blank

/s/ Pardee P. Bardwell 10/31/2005
Pardee Bardwell, Project Leader Date

/s/ Gregg J. Mangan 10-31-05
Gregg Mangan, Cache Creek Natural Area Manger Date

FONSI/DECISION RECORD

Project: Payne Ranch Oak-Grassland Weed Control Project.

1. FONSI

I have reviewed Environmental Assessment CA-340-05-014 and have determined that the proposed action of prescription grazing results in a Finding of No Significant Impact on the human environment. I find that proper consideration has been given to all resource values and that this assessment is technically adequate. Therefore, an environmental impact statement is not required to further analyze the environmental effects of the proposed action.

Reviewed by:

/s/ Gary Sharpe 11-1-05
Supervisory Resource Management Specialist Date

2. DECISION RECORD

I have reviewed the proposed action addressed in Environmental Assessment CA-340-05-014 and approve the proposed action as the decision of the Bureau of Land Management. The decision is to conduct the Payne Ranch oak-grassland weed control project using planned short duration rotational grazing treatment. The spread of noxious weeds on public land is of great concern to the BLM.

This decision is consistent with present land-use decisions and local government policy. The decision to use planned short duration rotational grazing treatment to reduce weed populations is not an irretrievable commitment of resources. Site-specific impacts have been addressed and impacts are minor. None of the impacts of this decision are considered to be significant or highly controversial enough to require an environmental impact statement.

Gregg Mangan and Pardee Bardwell will adhere to the Monitoring Plan included in this EA.

Approved by:

/s/ Rich Burns 11/1/05
Rich Burns Date
Manager, Ukiah Field Office